

To: R8EISC[R8EISC@epa.gov]
From: Drew Geller
Sent: Wed 8/12/2015 3:28:53 PM
Subject: Possible solutions for clean up

Hello,

I am inquiring about clean up of the Animas River. From the yellow hue of the river I'm guessing that there is a huge amount of lead sulfates in the water. One possible solution to containing the lead is to add vast amounts of ash to the river. Ash contains significant amounts of calcium, sodium and magnesium oxides. Adding ash to the river would produce a very exothermic reaction which is risky. However, the reaction would produce lead hydroxide which is very insoluble in water. In fact, the K_{sp} is around 10⁻²⁸. This would result in lead precipitates forming crystals in the river bed. They would have to be combed out of the river bed at a later point. However, doing this may help contain the heavy metal contamination and prevent it from spreading further downstream. Would you be able to forward this email to your environmental chemist.

My email address is **Personal Email/Ex. 6**